

Adaptation Finder

Which habitat video: Cypress Dome

Subject: Reading, Writing, Science, Art

Duration: 1 hour

Group Size: Up to 36 (6-12 breakout groups)

Setting: Classroom

Grades: 4-6

Standards:

Common Core: LACC.4.W.3.8, LACC.4.SL.1.1, LACC.5.SL.1.1, LACC.5.W.3.8, LACC.6.SL.1.1

NGSSS: SC.4.L.16.2, SC.5.L.15.1, SC.5.L.17.1

Vocabulary: limestone, depression, cypress knee, deciduous conifer, lichen, epiphyte

Objective(s)

Guiding Question: What are some of the observable plant adaptations in the cypress dome habitat?

Critical Content: Learn to identify ways plants adapt to their environments.

Student Objectives: Students will identify and compare various plant adaptations they observe in the Cypress Dome habitat.

Materials

- Chalk or dry erase board
- Chalk or dry erase marker
- Computer with internet access
- Pencil
- Copies of Cypress Dome Video worksheet (one per student)
- Crayons/markers/colored pencils
- Camera (optional)

Method Students will begin by exploring the definition of the word *adapt* then discuss various ways plants and animals adapt to their environment. After this discussion, they will watch a video about the Cypress Dome habitat paying close attention to the various plant adaptations they observe in the video. While watching the video, students will collect specific data about plant adaptations using the worksheet included in this lesson. After viewing the video, they will discuss the information they observed with small groups of their peers. To end the lesson, students will be asked to draw and color a picture of a cypress tree from the Cypress Dome. On this tree, they will include all of the items from the video worksheet, label them, and explain how each one is an example of plant adaptation.

Background The Everglades is a unique ecosystem due to the drastic changes in water levels throughout the park. One of the most important resources essential to plant and animal survival is water. Therefore, the flora and fauna in the Everglades must be able to adapt to these drastic changes in water level. The cypress domes are habitats within the Everglades where there are low depressions in the limestone bedrock that lines the floor of Everglades National Park. Most of these depressions remain filled with water, even throughout the dry season. Since animals are mobile creatures, this lesson serves to discuss adaptations specifically found in the plants within the cypress domes. There are unique characteristics that they adopt to help them survive in this special habitat such as: unique seed dispersal, plant symbiosis, adjusted root systems, halts in growth due to water, and shedding of parts that require higher water intake.

Suggested Procedures

- Create a T-chart on the board. On the left side give it the title “Definitions of the word *adapt*,” on the right side give it the title “Examples.”
- Discuss the word *adapt* and have students explain what they think this word means. Write their definitions on the board on the left side of the chart.
- Ask them for examples of ways that animals or plants can adapt to their environment. Write these examples on the right side of the T-chart.
- Discuss the cypress dome habitat and some of its distinguishing features such as the cypress tree, bromeliads, and depressions in the limestone where water collects. Explain that they will be watching a video for the purpose of identifying ways that the plants within the cypress dome habitat have adapted to their environment. Provide them with the video worksheet below to use to collect data.
- Play the Cypress Dome video for the class located at the following web address: <http://www.nps.gov/ever/photosmultimedia/mountainsandvalleys.htm>. Once the video has finished, have students discuss what they wrote on their worksheet in groups of 3-4.
- Revisit the definitions for the word *adapt* that students offered prior to viewing the video. Circle the definitions that were closest to what was explained in the video.

- On the back of their video worksheet, students will develop a definition for the word *adaptation* as they understand it after watching the video and engaging in discussions. Then, they will draw and color a picture of a cypress tree from the cypress dome presented in the video. On this tree, they will include all of the items from the video worksheet, label them, and explain how each one is an example of plant adaptation. (If your class is scheduled to visit a Cypress Dome at Everglades National Park, consider assigning the extension activity in lieu of this step.)
- To close the activity, have students share their illustrations with the class and explain how each part of the tree demonstrates plant adaptation.

Evaluation Cypress Dome Video Worksheet, cypress tree drawing and/or photo collage (see extension activity)

Extension This can be used as a pre-site activity with a slight modification. After the students discuss what is on their worksheet, have them visit a cypress dome in Everglades National Park. If possible, have them walk through the dome and examine the different items noted on the video worksheet. Then, they can take photographs of the different items to use in class later to create a photograph collage of different plant adaptations. Encourage them throughout the visit to document on their worksheet, and in photograph form, other plant adaptations they noticed which they can also include in their photo collage.

Post-Site Activity: After the visit to a cypress dome, have students print out the photographs they took of the various plants and their adaptations to create a photo collage on an appropriately sized poster board (if they only have six photographs, a large poster board is not necessary). On this poster board, have them write their own explanation of what the word *adaptation* means. Then, have them arrange the photographs however they would like. Next to each one, they must include a caption that explains what it is and how it relates to plant adaptation. To close this activity, have students present their collages to show the class the different plant adaptations they discovered during their trek through the Everglades.

Cypress Dome Video Worksheet

“Plant Adaptations” Activity

Directions: Next to each word, explain how it relates to plant adaptation in order to survive in the uncertain conditions in the cypress dome habitat. Use the Cypress Dome video to develop your answers.

Word	How does it relate to plant adaptation?
cypress knee	
deciduous conifer	
lichen	
epiphyte	